

The Multiple Backdrops of Forest Management Initiatives in Ethiopia: A Review Paper

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1. Introduction

Forest is one of the most essential kinds of resources that human beings and other animals depend on. It regulates environmental and ecological changes in which soil, water; climate, rainfall etc are in the good existence in sustainable condition. Whether it is private or public property, forest is nationally and globally mutual treasure (Terefe, 2003). In this regard, Ethiopia encompasses an extraordinary number of ecological zones with broad latitudinal and altitudinal ranges which enabled to harbors diverse flora and fauna. The country endowed resources is an issue of global importance as a center of genetic and agricultural diversity in particular for being host of rare species and high endemism (Girma, 2006; Lemenih et al., 2015).

Despite the unique endemic nature, the continuous deterioration has become a serious threat to both the ecological systems and economic development in Ethiopia. These problems have been attributed directly or indirectly to the rapid declining of the country's forest cover which is associated with unsustainable forest use and management (Meron, 2010). Deforestation and the resulting environmental degradation is a major problem challenging food security, livelihood and sustainable development. Between 1955 and 1979, over 77 % of the country's forested area disappeared and it continues to lose 8 % of its remaining forests annually (Winberg, 2010).

To curb the depletion, different government regimes of Ethiopia and other concerned NGOs¹ have been making efforts to manage forests through initiatives including community forestry, national forest priority areas, participatory forest management, carbon forestry and REDD². However, valuable information on the contributions of the different forest management initiatives is scanty and not well-complied.

Objective of the review paper

The objective of this paper is to provide valuable information for scholars, policy makers and others thoroughly reviewing cases studies on backdrop of the different forest management initiatives in Ethiopia

2. The Trend of Forest Management Initiatives in Ethiopia

In Ethiopia natural resources in general and forest specifically before 1974 were not the concern and a total disregard of sustainable use. However, starting 1975 different initiatives have been promoted by the government and concerned non-government organizations following decrees. Therefore, to compile the trend and implication of the different forest management initiatives, it is found to define some of the terms coined in each of the initiative as follow:

2.1. Community Forestry

In short, community forestry attempts to give de jure authority of forest resource use and management to local users and communities who may already have de facto rights to the forest (Agrawal and Ostrom, 2001). From this concept it can be drawn that individuals and groups may possess well-defined property and resource-use rights. However, in Ethiopia following the proclamation of 1975 nationalization of rural natural resources became the primary concern of the socialist government and the community forestry between 1974 and 1991 was a very protective and exclusionary (Bekele, 2003). The initiative had three main activities which were nursery activities, community woodlots and hillside plantations (Mengistu, 1994).

The other initiative which was promoted by the socialist government was establishing National Forest Priority Areas (NFPAs). Thus, the government order further identified all forest areas above 80 hectare as state forests (Yemiru, 2011). The strategy identified 58 NFPAs and with stated of protecting and developing the remaining natural forests, allocate available resources on these areas and introduce integrated forest management, with an ultimate goal that each NFPA becomes a self-financing enterprise. Most of these NFPAs were not gazetted and the forestry services at the national and regional level lacked clear legal titles to these areas. Hence an open access situation has prevailed leading to encroachment (Mengistu, 2002).

2.2. Participatory Forest Management

Participatory forest management: attempts to secure and improve the livelihoods of local people, dependent on forest resources, by involving all key stakeholders in the process of forest management, understanding their

¹ Non-Government Organization

² Reducing Emissions from Deforestation and Forest Degradation

needs and situations, allowing them to influence decisions and receive benefits, and increasing transparency. Participatory forest management is used as an umbrella term to include shared forest management, joint forest management, collaborative forest management and community forestry (ITTO¹, 2002). Participatory Forest Management (PFM) is a mechanism to protect forests and enhance the livelihoods of communities who use and benefit from them in the process. Participatory Forest Management was first introduced to Ethiopia thirteen years ago but the approach is expanding to cover more and more hectares of forest across the country (Winberg, 2010).

2.3. Carbon Sequestration Forest Initiative

Forests involve largest carbon pool of all terrestrial ecosystems. According to Von (2006) tree-based systems and carbon sequestered through process of photosynthesis remains fixed in wood and other organic matter in forests for long period of time. Forest which is restored from degraded land through assisted regeneration and afforestation to offset emission of GHG from industrial countries (Murugan and Israel, 2017).

2.4. Reducing Emissions from Deforestation and Forest Degradation (REDD+)

REDD+ is the term used for a proposed multilateral policy aiming to incentivize developing countries to reduce greenhouse gas emissions and increase removals by limiting deforestation and forest degradation, conserving forest carbon stocks, sustainably managing forests and enhancing forest carbon. Thus, REDD+ requires reducing emissions both from deforestation and forest degradation (Skutsch and McCall, 2012; Beyene et al., 2013).

Therefore, in the current and the future provision of forest management initiative of Ethiopia, REDD+ is a widely used acronym, but the definition is a moving target. The original definition – Reduced Emissions from Deforestation (RED) – quickly expanded to include forest Degradation (REDD). Now, the most commonly used acronym is REDD+ recognising the role of sustainable forest management and enhancement of forest carbon stocks – afforestation and reforestation – in addition to avoided deforestation and degradation. Many recently proposals want to further extend the REDD+ definition to wetlands and agricultural lands and thus soil carbon. Such an extension could benefit countries like Ethiopia that have substantial smallholder farmland; the inclusion could allow emission reductions from improved agricultural practices to be accounted for (BERSMP, 2010).

2.5. Anecdotal on Forest Coverage of Ethiopia

Hundred years ago, about 40% of land was covered by forest in Ethiopia whereas only less than 3% of the land is covered by forest currently (Bedru, 2007). Natural resources degradation, a major form of which is deforestation and de-vegetation, has become a serious problem in Ethiopia. At the present, natural forests cover a tiny fraction of the country's total area and these are found in small patches mainly in the southern and southwestern parts which are unevenly distributed (Tola and Woldeamlak, 2007).

However, empirical evidences on the forest cover and status of Ethiopia are varying. For instance, according to FAO (1990) the cover was 13.5% of the total land of the country while that of EFAP² (1993) report indicated as it covered 2-3%. Furthermore, FAO (2001) estimated the forest cover to be 35.13million ha (28.5%) by defining natural high forests, woodlands, plantations and bamboo as forests. However, as cited in Yemiru (2011), the most reliable estimate of forest covers of Ethiopia is a 4.07million ha which is 3.5% of the total area of the country. The estimate does not include woodlands and shrub lands categorized as non-forests which cover an area of 29.2 million ha (25.5%) and 26.4 million ha (23%) respectively.

Even though there is no unanimity between empirical information and among different scholars, it was known for continuous decline as shown in Table1 below. It is possible to draw that the forest cover is dramatically reduced to 2.3% currently from where it was in 1950 that is 16% and 40% in early of 20th century (Meron, 2010). The very reasons for such continuous decline in forest cover were associated with mismanagement particular in the past. Thus, imperial government is remembered for its notorious scheme of agricultural expansion at the expense of forests to increase its tax revenue (Melaku, 2003).

Table1: Trend of Forest Reduction in Ethiopia

| Year | Original cover | 1950's | 1990's | 2000 |
|-------------------|----------------|--------|--------|------|
| Forest cover in % | 65 | 16 | 2.7 | 2.2 |

Source: Berry (2003)

Despite the juncture and anecdotal associated with the forest coverage of Ethiopia, due to rapid population growth and natural factors, the existing natural forests are being depleted and brought significant decline in their biodiversity to the extent that some species are on the verge of local extinction (Abiyu et al., 2015). Moreover, mainly through the conversion of natural vegetation to agricultural lands, unbalanced crop and livestock production, and settlement; the rapid deterioration of forest covered areas continued in Ethiopia

¹ International Tropical Timber Organization.

²Ethiopian Forestry Action Program

(Wondie, 2015).

2.6. Current Status and Future Perspective

It is estimated that Ethiopia's closed canopy forest cover has been decreasing temporally and spatially since the beginning of this century. In no other country in Africa is the impact of deforestation more severe as majority of its annual energy supply comes from biomass and annual demand for wood. Beside this, deforestation that arises largely due to the conversion of forests to other agricultural land-use is increasing pressure (Ermias, 2010). Therefore, it is very crucial to have way forward to the management of the remnant forest ecosystems.

Recently, the forestry sector has got much attention at national level. For instance, all forests resource in the country is going to be established under a new management initiative system to control the degradation of forests (Alemtsehay, 2010). The importance of forest to climate change adaptation and mitigation, livelihood, national economy, watersheds and agricultural production is eminent. Despite its effort undertaking encouraging massive tree-planting campaigns in connection with the celebration of its unique Millennium, deforestation still poses the greatest threats to the remnant forests in Ethiopia (Abayneh et al., 2004).

Even though, the Socialist government nationalized all forest resources of the country making itself not only the exclusive owner but also the sole forest developer, the forest management efforts have been made since the early stage of Derge by designing rigorous repressive regulations (Melaku, 2003; Terefe, 2003). Following the decentralization of the state administration in the current regime and understanding the impossibility of managing forest without the involvement of the people who live with the forest, the government proclaimed different decrees that advocate the need to transfer responsibilities and participate the local dwellers in the benefit sharing (Terefe, 2003; Yemiru, 2011).

Ethiopia is a country endowed with unique endemic fauna, flora and forest resources. Dry evergreen Afromontane forests are few patches of forests that now remain around farmlands and churches (R. Hiranmai and Eyasu, 2013). The forest resources in Ethiopia have suffered decades of mismanagement due mainly to loosely defined property relations over these resources. As one of the solutions, Participatory Forest Management (PFM) scheme was introduced during the early 1990s by some NGOs. Nearly two decades of experience now exists in the country. However, systematic assessments of the performance of the scheme are scanty (Gobeze et al., 2009). The Bale Mountains of Ethiopia are an example of one such unique and highly important ecosystem facing many socio-economic challenges (Girma, 2006).

However, such efforts performed poorly since they were emphasizing on the narration of forest degradation overlooking the traditional use right of the people (Yemiru, 2011). Above all, from 1991 onwards the state moved responsibility without putting appropriate organizational setting in place. Thus, the country's forests remained in a state of open-access and rapid deforestation. So PFM with the aim of taking the forest resource out of a non-property situation give communities rights and help rehabilitate the forest resource (Melaku, 2003). Besides the conservation oriented approaches which were with limited understanding of the existing socio-economic status quo, the tendency of the government policy has promoted different non-governmental organizations to pioneer community based forest managements. Thus, following the footsteps of proclamations forest conservation, development and utilization, FARM-Africa and SOS Sahel have started PFM in the central and southern parts of Ethiopia (Melaku and Tsegaye, 2005; Yemiru, 2011).

An agreement negotiated under the United Nations Framework Convention on Climate Change (UNFCCC) Kyoto Protocol allows industrialized countries to meet greenhouse gases reduction by supporting initiatives in developing countries. This is assumed to be achieved through enhancing sustainable development that contributes to the reduction of atmospheric carbon dioxide in these host countries mainly of developing countries (Povtal et. al., 2006). The supports includes scaling up the emerging financing mechanisms like carbon forestry, clean development mechanism and reduced emission of deforestation and degradation of forests (Yitebitu et al., 2010; Griscom and Cortez, 2013).

The practices recognized in the first commitment include afforestation and reforestation projects both of which refer to the human conversion of land from non-forest uses to forest (povtal et.al., 2006). As response of the challenges of climate change and one of the signatories at Kyoto protocol which is the United Nations Framework Convention on Climate Change (UNFCCC), Ethiopia has launched climate change resilience green economy strategy (EPA, 2012). One of the typical roles played by the country is promoting afforestation and reforestation projects.

REDD+ involves a new way of curbing land use based CO₂ emissions. It is a mechanism which provides an economic incentive to encourage developing countries to reduce carbon emissions through putting in place sustainable forest management. Now days, the significance of the REDD+ Program in Ethiopia is gaining momentum. In this regard, REDD+ is part of a national strategy, referred to as Climate Resilient Green Economy (CRGE) strategy that aims at the main sectors of the economy to develop an environmentally sustainable and climate resilient economy, which brings the country at middle income status with net zero emission by

2030(MoEF¹, 2014). In line with country's strategy and agreement, World Vision Ethiopia has initiated community based forest management in collaboration with local people to rehabilitate the degraded forest and optimize forest management benefits through carbon forestry financing around Mount Damota in Wolaita Zone. The project builds on Humbo community managed reforestation project which registered as carbon project in the world (WVE, 2010).

3. The Contribution of Forest Management Initiatives in Ethiopia

Ethiopia's efforts on natural forest restoration and the installation of plantations are expected to result in a reduction of forest degradation and deforestation. At present there are efforts that the government and local communities are employing. Establishment of protected and forest priority areas, as well as protecting the sacred forest sites and introducing new energy efficient stoves are attempts taken to protect forests in the country. Rehabilitation of forests through afforestation, reforestation and area enclosures with participatory forest management practices are another conservation efforts that the government is implementing(Tigabu, 2016).

Understanding these, attempt has been made to introduce Participatory Forest Management (PFM) by various NGOs and donor agencies such as FARM-Africa and SOS Sahel in Bonga, Borana, Chilimo forests and in Bale Massif, GTZ in Adaba-Dodola and Mojo, JICA in Belete Gera Forest (Mengistu, 2002; Gobeze et al., 2009).Therefore, in the next section of the review paper the implications of the different forest management initiatives on Livelihoods and Income, *social and environmental* aspects of the local people will be presented.

3.1. Sustainable Livelihoods Opportunities

The local people who depend on the forest resources for their livelihoods are under increasing pressure from changes in and the declining availability of their livelihoods and exclusion. The poorest of these people often are becoming isolated from the forest uses that have been part of their livelihoods. However, recent studies made one the livelihood implication the different management initiatives in Ethiopia showed positive improvements. In this regard, the livelihood diversification component of the FARM-Africa/SOS Sahel PFM is founded on the understanding that poverty alleviation among the most deprived forest users by reducing household dependency on forests for cash and subsistence needs (Terefe, 2003; Tesfay, 2011).

Other studies at Bale-Eco region showed that the livelihood of PFM associations members (WAJIB)² has been improved. For instance, Mengstu (2013) revealed that wild coffee and honey, fire and construction wood, grazing fodder and wild medicinal plants have increased the forest base income of the WAJIB members. The same studies further indicated that indicated that OFWE³ has been engaged in honey value adding processes like filtering, packing, labeling and marketing (Figure1). However, key informants indicated that it was practiced at very small level and in less coordinated manner between communities. Evaluation made by Melaku and Tsegaye(2005) indicated that PFM program has contributed to collect fuel wood from forests for domestic use, and supply of construction wood upon request. The other contribution includes the livelihood support from potato, banana, enset, poultry and vegetable farming.

¹ Ministry of Environment and Forest

² Acronym for Forest Dwellers Association in Oromo's language

³ Oromia Forest and Wild life of Enterprise



Figure1: Traditional bee keeping (A) and honey processing and packing (B) for income generation in Dalo Mena Bale –Ecoregion, Source: Mengstu (2013)

The study evidence at Dendi District, in Ethiopia showed that participatory forest management enhanced the non-cash oriented livelihood through for example forest wood for cooking and construction purposes and fodder for livestock (Tadesse and Alemtsihay, 2012). The PFM which is being mainly in the three sites (Chilimo, Bonga and Bale Eco-region). These values can be classified into two categories, or value systems, which we call hard and soft value systems. Hard value systems refer to tangible, actual product values and realizable incomes, such as timber which contribute to their livelihood as shown table (Temesgen et al., 2007).

Alternative livelihood and income improvements were assessed by looking into the individuals' access to various types of income sources, creating employment opportunities, accesses to social services and increased productivity of their farm around the Sodo community managed forest for carbon sequestration in Southern Ethiopia. According to the result of the study alternative income to livelihood through apple and honey production as it was witnessed by the success story of the key informants who have adopted the production of apple and access to water which changed the way they lived as shown in the below figure 2. The alternative income was also narrated from the focus group discussants those who have produced utensils, basketry, container for grain, local spinning tools and received fodder from shoot, leaves and stem of bamboo or *Arundinaria alpine* (Azene , 2007). In line to this study, complementary livelihood contributions of such participatory forest managements were reported (Girma, 2006).

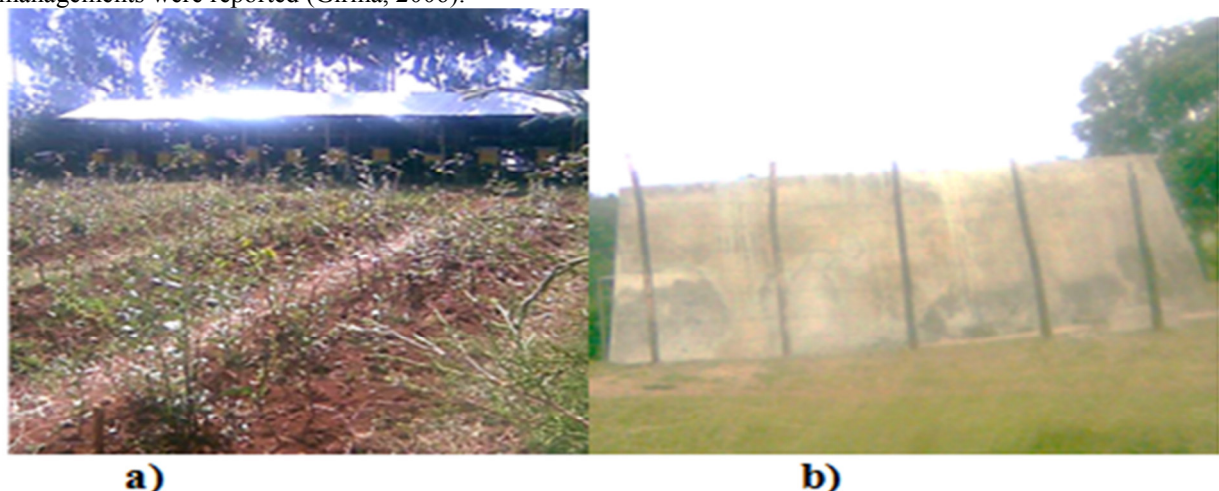


Figure 2: The multiple improvements of the project: apple and modern hive distribution center (a) and water point constructed (b) near Mount Damota carbon sequestration forest
Source: field observation photos by Belete (2014)

The fact that *Acacia*, *Boswellia* and *Commiphora* can grow under harsh environment, means that there is even a potential to sequester carbon in extreme environmental circumstances. These plants can also act as wind breaks and, thus, reduce loss of soil carbon by wind; and intercept rain drops by their widely spreading canopies, reduce speed of surface run off and thus reduce soil erosion effectively thereby stabilizing soils and protecting soil carbon (Mulugeta and Habtemariam, 2007).

3.2. Environmental Contribution

Environmentally, in the household survey conducted around carbon forestry project of Mount Damota in Southern Ethiopia, about 76.03% respondents indicated as the conditions of their environment are getting improved after the implementation of the project (Belete, 2014). Regarding the perceived environmental improvements, the key informants also mentioned some wild animals those started to enter to the rehabilitated forest area like Hyna, Moneky, Ape, Rabbit, Fox, Tiger and different species of Birds. They also added about the improvements of the rehabilitation on availability of water by naming some of the springs that emerged from rehabilitated forest which included Diguna, Weselemo, Balgubasa, Atekusa, Mengesha mena, Mena gedebio, Kuman dabo, Ekua, Tega and Danche as shown in Figure3 (A and B).



Figure3: Rehabilitated degraded forest land (A) and one of the springs emerged after the rehabilitation (B) near Mount Damota carbon sequestration forest site. Source: Belete (2014)

Table 2: Perceived improvements on environmental conditions

| Before | | | After | |
|--------------------------|-----------|-------|-----------|-------|
| Environmental conditions | Frequency | % | Frequency | % |
| Worsened | 142 | 97.26 | 2 | 1.37 |
| Improved | - | - | 111 | 76.03 |
| No change | 4 | 2.74 | 18 | 12.33 |
| Don't know | - | - | 15 | 10.27 |
| Total | 146 | 100.0 | 146 | 100.0 |

Source: Belete (2014)

Similarly in Chilimo PFM program has contributed to stabilization of the resources basis itself: year round pasturage; fodder for bees; production of wild honey; unrestricted access (Melaku and Tsegaye, 2005). Tree plantations have the potential to improve the soil fertility by accumulating biomass, increasing the amount of organic matter returned to the soil, enhancing plant nutrient availability and decreasing bulk density. The maintenance of biodiversity is another potential benefit (Poultouchi, 2010). According to Temesgen et al. (2007), the environmental impacts of PFM are categorized as no-tangible (soft) values as in Table3 below:

Table 3: Hard and soft forest values

| Hard forest values | Soft forest values |
|---|--|
| Timber products – construction wood, furniture, carving, fuel wood | Watershed values – water |
| Non-timber forest products – Honey, medicinal plants, forest foods, spices, forest coffee | Environmental values – soil, climate and environmental stability |
| Grazing – grass and fodder reserves | Cultural and social values – forest dwellers/livelihoods/resource rights |
| New product opportunities – Tourism, wildlife | Religious values – religious and sacred sites |

Source: Temesgen et al. (2007)

3.3. Social and Institutional Implications

As it is being indicated by many recent studies, generally the social and institutional aspects of the forest project area are improving from time to time. Thus, creation of more jobs, income increase and living condition improvement for the local communities living nearby the reforestation areas, especially the ethnic minorities, through the reforestation activities among the major manifestation of the implication of different forest management initiatives in Ethiopia.

3.3.1. Social Equity

In Bonga one can observe a great success in the transformation of the social lives of the Manjas. They were the “untouchables” in the Kaffa zone and one of the disadvantaged and ostracized communities in the area. The significance of the Bonga PFM project lies not only in establishment and institutionalization of sustainable forest conservation and utilization as well as in the diversification and improvement of livelihoods of the user groups, but also in the efforts being made to ease Manja’s segregation. FARM Africa’s achievement in this line can be termed as impressive. Empowering such groups and women is both an economic and social successes (Melaku and Tsegaye, 2005). The approach is individual self-esteem and confidence and the process helps them to sense their collective power to bring positive change and encourage them to claim some rights as is the case with the Menjas of Bonga (Mulugeta and Melaku, 2008).

3.3.2. Enhancing the Positions of Women

According to Mulugeta and Melaku (2008), the good feature of establishing PFM is the way gender issues are addressed. Thus, women and men have equal involvement and roles in decision making either as a household (e.g. Chilimo) or individually (e.g. in Bonga). Similarly, before the commencement of carbon sequestration forest around Mount Damota, Women were alienated from participating in activities which could have contributed to their income. Now thanks for tireless efforts made by the project proponent (World Vision Ethiopia) the situation is getting improved and it is common to see women engaging in forest related activities. This may be taken as insight for the process of women’s capacity building in development (Belete, 2014). As result of the start of PFM in Chilimo and Bonga the women have started to participate in the decision making processes concerning forests and other means of livelihood, although their presence in the committees is still low. They have become full masters of their home gardens and also participate in nursery activities (Melaku and Tsegaye, 2005).

3.3.3. Institutional Improvements

Recently established forest management initiatives in Bonga, Borana and Chilimo have started by recognizing and building on the basis of existing traditions working with local institutions like Gada given that the disadvantage is take in to account (Mulugeta and Melaku, 2008). Typical example for the local institutional capacity development as result of carbon sequestration project is indicated at around Mount Damota (Belete, 2014). Accordingly, all of surveyed household perceived improved institutional arrangement in the collaborative approaches between the local people, World Vision and the government administration in managing the degraded forest. As they further added before the implementation of the project it was very rare to see such coordination of concerned institutions which were responsible to management the forest.

According to the same author, on other hand, the key informants have observed the improved institutional arrangement in the collaborated intervention of the local people, World Vision and the government administration in settling dispute that arose between farmers zoning the freely accessed forest. As results of the collaborative efforts, the forest site has been legally recognized as owned by the cooperatives so as to exclude other claimants (non-members).

Awareness: Members aware of the socioeconomic and environmental consequences of deforestation in both project sites. The long collective exercise to implement PFM in both places has reduced individualistic outlook of community members and has encouraged cooperative spirit. Not only peasant communities’ awareness and confidence were enhanced by the PFM process (Melaku and Tsegaye, 2005).

4. Challenges of Forest Management Initiatives

Even though the various forests management initiatives have been considered as right way to enlist the true people in management of the nearby forest, practically there are challenges associated that became barriers for further scaling up largely. For instance, Temesgen et al. (2007) indicates forest based livelihood opportunities are being missed, supply and demand resource flows are not managed and non-forest-based livelihoods do not significantly reduce pressure on forest. Similarly, Melaku and Tsegaye (2005) and Mulugeta and Melaku (2008) pinpointed challenges associated with PFM which include limitation of the experience to a few areas, the bureaucratic resistance, the scepticisms of peasants about new ideas, limited technologies, sustainability of the projects after NGOs terminates, multiple conflicting interests, unclear forest boundary various perspectives such as traditional management and use system.

Distribution of forests under different forms of governance, while funding and financial partnerships exist for initiatives such as REDD+ and these initiatives do not fully address the cultural, environmental, provisioning

and recreational benefits (Agrwal et al., 2013). Despite relatively low investments in REDD+ within Ethiopia, there are several challenges in tracking REDD+ financial flow: According to Yitebitu (2010), REDD+ is facing lack of up-to-date data on forest resources, lack of active carbon finance, difficult to disclose financial information, lack of institutional capacity and lack of a national REDD+ registry.

Generally, PFM are efforts are being reported and criticized for focusing on conservation of forests overlooking the traditional use right of the local people. The critiques also include moving responsibility without putting appropriate organizational setting in place. For these reasons, the forests remained in a state of deforestation and the national policies were found little exercised on the ground (Mulugeta Lemeneh and Melaku Bekele, 2008; Yemiru Tesfaye, 2011). Above all, knowledge and experiences on carbon sequestration based reforestation is highly limited, particularly in the field of management, monitoring and evaluation on socio-economic and environmental impacts risk insurance not yet available (fire, pests) and possibility of force majeure plenty of areas for reforestation, but majority allocated in scattered lots, in the remote zone with high slope and most important: You have to know how to sell! Find the right mixture of high quality product and emotional story.

5. Conclusion

Due to latitudinal and altitudinal variation, Ethiopia became a host for diverse flora and fauna which are an issue of global importance as a center of genetic and agricultural diversity. However, despite the unique endemic nature, the continuous deterioration has become a serious threat to both the ecological systems and economic development. These problems have been attributed directly or indirectly to the rapid declining of the country's forest cover which is associated with unsustainable forest use and management. To curb the depletion, the different government regimes of Ethiopia with NGOs have been making efforts to manage forests through initiatives including community forestry, national forest priority areas, participatory forest management, carbon forestry and REDD+.

However, as it indicated in the historical trend of different forest management initiatives, the management approaches were very exclusionary during the imperial and the socialist Derge time which remained without significant role in the livelihood of the local people. Currently, following the policy of the government, participatory forest managements are being practiced to address the problems of deforestation with active participation of the local people in different parts of Ethiopia. As recently conducted studies showed the different forest management initiatives are playing positive roles in improving the livelihood, environmental and institutional situations of the nearby communities. However, the PFM efforts are being reported and criticized for focusing on conservation of forests overlooking the traditional use right of the local people. The critiques also include moving responsibility without putting appropriate organizational setting in place, absence of institutions, lack of financial tool to REDD+, limited experience of scaling up best practices and multiple conflicting interests.

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